

# SR UNIVERSITY

## AI ASSISTED CODING

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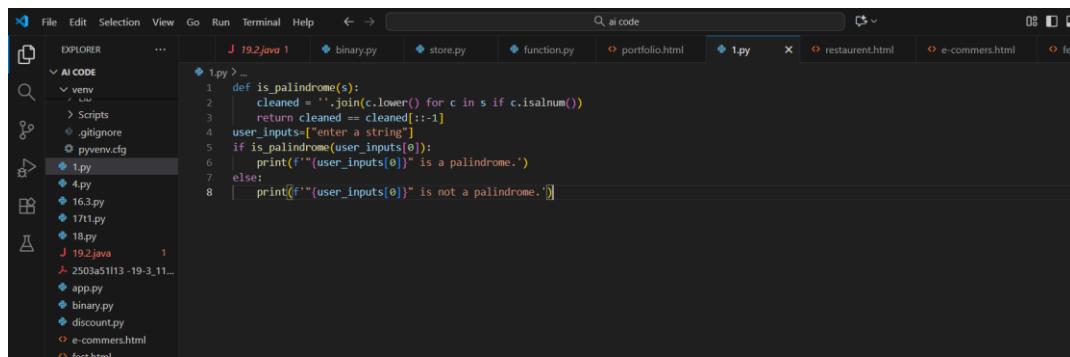
2503A 5112

### TASK #1:

#### Prompt Used:

Write a comment: # Function to check if a string is a valid palindrome (ignoring spaces and case) and allow Copilot to complete it.

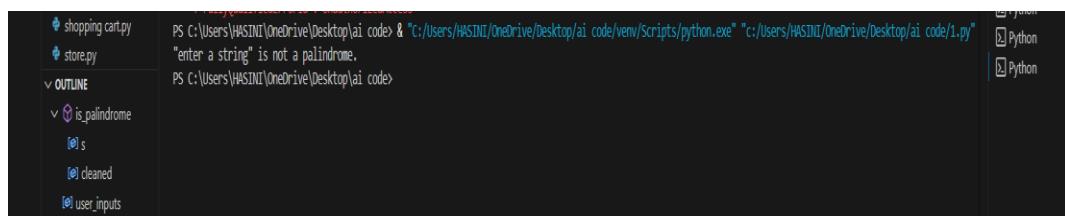
#### Code Generated:



```
File Edit Selection View Go Run Terminal Help ↻ → ai code
EXPLORER ... J 19.2.java 1 binary.py store.py function.py portfolio.html t.py x restaurant.html e-commerce.html fe
AI CODE
venv .gitignore pyenv.cfg
1.py 4.py 16.3.py 17t1.py 18.py
J 19.2.java 1
2503a5112 -19-3.11...
app.py binary.py discount.py e-commerce.html fact.html

1.py ? ~
1 def is_palindrome(s):
2     cleaned = ''.join(c.lower() for c in s if c.isalnum())
3     return cleaned == cleaned[::-1]
4 user_inputs=["enter a string"]
5 if is_palindrome(user_inputs[0]):
6     print(f'"{user_inputs[0]}" is a palindrome.')
7 else:
8     print(f'"{user_inputs[0]}" is not a palindrome.')
```

#### Output:



```
PS C:\Users\HASINT\Desktop\ai code> & "C:/Users/HASINT/OneDrive/Desktop/ai code/venv/Scripts/python.exe" "c:/Users/HASINT/OneDrive/Desktop/ai code/1.py"
"enter a string" is not a palindrome.
PS C:\Users\HASINT\Desktop\ai code>
```

#### Observations:

- It cleans the input by removing all non-alphanumeric characters and converting everything to lowercase, ensuring accurate results regardless of punctuation, spacing, or case.
- Checks for palindrome by comparing the cleaned string to its reverse (cleaned[::-1]). If both match, the string is a palindrome.

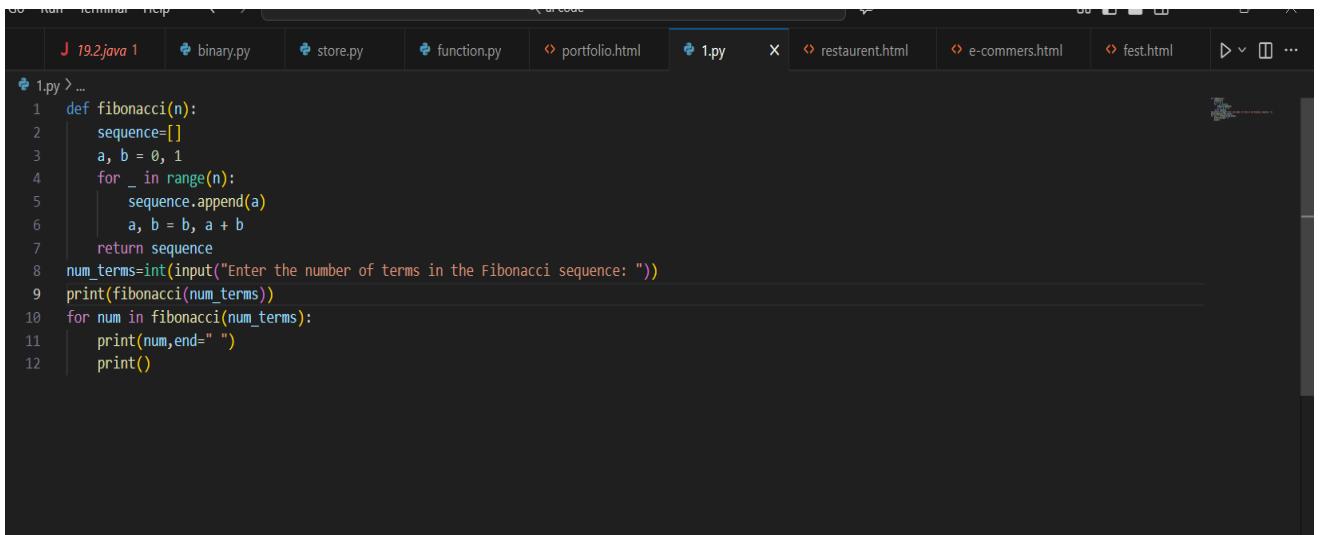
- Works for sentences and phrases (not just single words), as spaces, punctuation, and cases are ignored in the check.

## TASK #2:

### Prompt Used:

Generate a Python function that returns the Fibonacci sequence up to n terms. Prompt with only a function header and docstring.

### Code Generated:

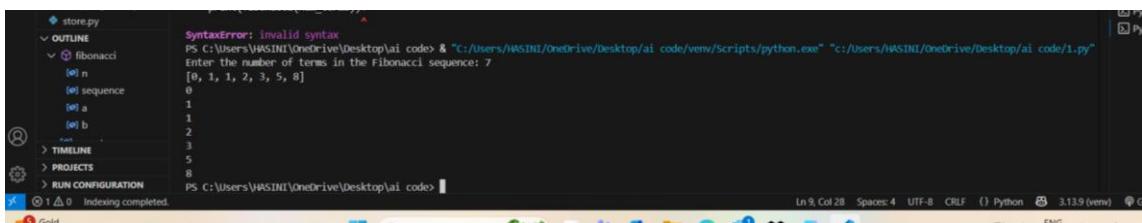


```

1.py > ...
1  def fibonacci(n):
2      sequence=[]
3      a, b = 0, 1
4      for _ in range(n):
5          sequence.append(a)
6          a, b = b, a + b
7      return sequence
8  num_terms=int(input("Enter the number of terms in the Fibonacci sequence: "))
9  print(fibonacci(num_terms))
10 for num in fibonacci(num_terms):
11     print(num,end=" ")
12     print()

```

### OUTPUT:



```

store.py
fibonacci
n
sequence
a
b
TIMELINE
PROJECTS
RUN CONFIGURATION
Indexing completed.

SyntaxError: invalid syntax
PS C:\Users\HASINI\OneDrive\Desktop\ai code> & "c:/Users/HASINI/OneDrive/Desktop/ai code/venv/Scripts/python.exe" "c:/users/HASINI/OneDrive/Desktop/ai code/1.py"
Enter the number of terms in the Fibonacci sequence: 7
[0, 1, 1, 2, 3, 5, 8]
0
1
1
2
3
5
8

```

### Observations:

- The code generates the Fibonacci sequence up to a user-specified number of terms using a simple iterative approach.

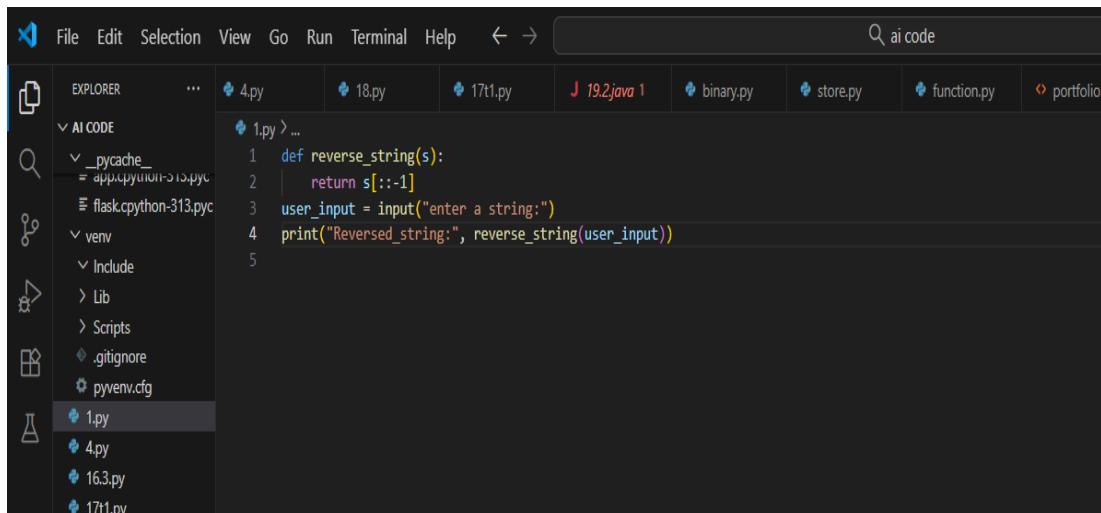
- The sequence is generated by initializing the first two terms ( $a = 0$ ,  $b = 1$ ) and iteratively updating them with  $a, b = b, a + b$ , ensuring each new term is the sum of its two immediate predecessors.
- Each generated term is stored in a list, which is then returned and printed.

### TASK #3:

#### Prompt Used:

Write a comment like # Function to reverse a string and use Copilot to generate the function.

#### Code Generated:



```

File Edit Selection View Go Run Terminal Help ⌘ ⌘ ai code
EXPLORER ... 4.py 18.py 17t1.py J 19.2.java 1 binary.py store.py function.py portfolio...
AI CODE _pycache_ flaskcpython-313.pyc
venv Include
Lib Scripts .gitignore pyvenv.cfg
1.py 4.py 163.py 17t1.py

1.py > ...
1 def reverse_string(s):
2     return s[::-1]
3 user_input = input("enter a string:")
4 print("Reversed_string:", reverse_string(user_input))
5

```

#### Output:

```

SyntaxError: "(" was never closed
PS C:\Users\HASINI\OneDrive\Desktop\ai code> & "C:/Users/HASINI/OneDrive/Desktop/ai code/venv/Scripts/python.exe" "c:
enter a string:HASINI
Reversed_string: INISAH
PS C:\Users\HASINI\OneDrive\Desktop\ai code> 

```

#### Observations:

- The function uses Python's string slicing syntax `s[::-1]` to reverse the string.
- The slice step of `-1` means characters are taken from end to start, effectively reversing the string.

- User input is taken and passed to the function, with the reversed result printed.

## **TASK #4:**

## Prompt Used:

Generate a program that simulates a basic calculator (add, subtract, multiply, divide). Write the comment: # Simple calculator with 4 operations and let AI complete it.

## **CODE GENERATED:**

```
cache_.pyc  
p.cpython-313.pyc  
sk.cpython-313.pyc  
y  
clude  
o  
ipts  
tignore  
venv.cfg  
r  
t  
.py  
.py  
y  
java 1  
Ba51I13 -19-3_11...  
.py  
try.py  
ount.py  
ommers.html  
html  
ction.py  
pdf  
• 1.py > ...  
1     # Simple calculator with 4 operations  
2  
3     def calculator(a, b, operation):  
4         print('select operation: ')  
5         print('1. Addition')  
6         print('2. Subtraction')  
7         print('3. Multiplication')  
8         print('4. Division')  
9     choice = input('Enter choice (1/2/3/4): ')  
10    num1=float(input("Enter first number: "))  
11    num2=float(input("Enter second number: "))  
12    if choice == '1':  
13        | | print("result:", num1 + num2)  
14    elif choice == '2':  
15        | | print("result:", num1 - num2)  
16    elif choice == '3':  
17        | | print("result:", num1 * num2)  
18    elif choice == '4':  
19        | | if num2 != 0:  
20            | | | print("result:", num1 / num2)  
21        | | else:  
22            | | | print("Error: Division by zero")  
23    else:  
24        | | | print("Invalid input")
```

## OUTPUT:

```
SyntaxError: '(' was never closed
PS C:\Users\HASINI\OneDrive\Desktop\ai code> & "C:/Users/HASINI/OneDrive/Desktop/ai code/venv/Scripts/
enter a string:HASINI
Reversed_string: INISAH
PS C:\Users\HASINI\OneDrive\Desktop\ai code> & "C:/Users/HASINI/OneDrive/Desktop/ai code/venv/Scripts/
Enter choice (1/2/3/4): 3
Enter first number: 3
Enter second number: 8
result: 24.0
PS C:\Users\HASINI\OneDrive\Desktop\ai code>
```

## Observations:

- The function uses Python's string slicing syntax `s[::-1]` to reverse the string.
- The slice step of `-1` means characters are taken from end to start, effectively reversing the string.
- User input is taken and passed to the function, with the reversed result printed.